STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF MANAGEMENT AND BUDGET
STATE PLANNING COORDINATION

October 21, 2005

Mr. Greg Scott
Scott Engineering, Inc.
838 Walker Road, Suite 212
Dover, DE 19904

RE: PLUS review – PLUS 2005-09-12; Meding Property

Dear Mr. Scott:

Thank you for meeting with State agency planners on October 5, 2005 to discuss the proposed plans for the Meding Property project to be located on the northeast side of Canterbury Road and the southwest side of Andrews Lake Road.

According to the information received, you are seeking site plan approval for 238 residential units on 106.62 acres.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as Kent County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

State Strategies/Project Location

This project is located in Investment Levels 2 and 3 according to *Strategies for State Policies and Spending.* This site is also located in the Kent County Growth Zone. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. Investment Level 3 reflects areas where growth is anticipated by local, county, and state plans in the longer term future, or areas that may have environmental or other constraints to development. In this case the Investment Level 3 areas correspond to the existing wooded portion of the site. State investments will support growth in these areas. Our office has no objections to the proposed development of this project in accordance with the County codes and ordinances.

Street Design and Transportation

- The proposed development exceeds DelDOT traffic volume warrants for a traffic impact study (TIS). Accordingly, we will require a TIS for this development.

- Andrews Lake Road is classified as a local road and Canterbury Road is classified as a major collector road. Local roads in Delaware typically have right-of-way widths ranging from 33 to 50 feet. Collector road rights-of-way also vary but are generally wider. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads and 40 feet from the centerline on collector roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.

- The developer will be required to improve Canterbury Road to meet DelDOT's standard typical section for major collector roads for the length of the site frontage and Andrews Lake road to meet DelDOT's standard typical section for local roads.

- An entrance is proposed on Andrews Lake Road opposite Mamon Way in the Harrison Knoll subdivision. Consideration should be given to locating either that entrance or a second entrance opposite Pickwick Boulevard in the Pickwick Acres (a.k.a. South Glen) subdivision.

- Although it was not mentioned at the PLUS meeting, protected left turn lanes would be likely be required at the Andrews Lake Road entrance(s) and a single lane roundabout should be considered as an alternative to protected left turn lanes. If a roundabout is to be used, it should be evaluated in the TIS.

Natural and Cultural Resources

- The DHCA requests that the historic complex be maintained on a large lot within the development. They also request that there be sufficient landscaping along Canterbury Road to block the view of this development from the adjacent and nearby historic properties. The DHCA strongly urges the developer to maintain the woods as they are. However, if this is not feasible, the DHCA would appreciate the opportunity to check the parcel for archaeological sites to learn something about their location and nature before any ground-disturbing or tree-clearing activities take place.

- This project is located directly adjacent to sensitive headwater or near headwater riparian wetlands (Double Run and Spring Creeks) associated with the greater Murderkill River watershed – greatly increasing the probability of harmful impacts to surface and groundwater quality of all waters of said watershed, thus making it more difficult for the State to achieve the required TMDL nutrient reductions. In recognition of this concern, the Watershed Assessment Section strongly recommends that the applicant consider preserving the existing natural forested buffer in its entirety. **Otherwise –a 100-foot upland buffer width is the minimum acceptable distance that should be maintained between all wetlands and water bodies (including ditches).** Lot lines, roadways, and stormwater management ponds should not be located within this buffer zone

- The DNREC Water Supply Section has determined that the eastern half of the property falls entirely within an area of excellent groundwater recharge (see following map and attached map). The excellent recharge area corresponds roughly with a forested area on the eastern part of the property with 22.33 acres of this naturally forested area proposed for removal. The current state of forested recharge area is ideal to replenish the local unconfined aquifer. Whatever steps can be taken to preserve this area is encouraged. DNREC Water Supply Section recommends that that portion of the new development within the excellent recharge area not exceed 20% impervious cover.

- We encourage the applicant to consider redesigning the subdivision to preserve a large contiguous block of forest. The current design fragments the forested area into small groups of trees.

The following are a complete list of comments received by State agencies:

Office of State Planning Coordination – Contact: David Edgell 739-3090

This project is located in Investment Levels 2 and 3 according to *Strategies for State Policies and Spending.* This site is also located in the Kent County Growth Zone. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. Investment Level 3 reflects areas where growth is anticipated by local, county, and state plans in the longer term future, or areas that may have environmental or other constraints to development. In this case the Investment Level 3 areas correspond to the existing wooded portion of the site. State investments will support growth in these areas. Our office has no objections to the proposed development of this project in accordance with the County codes and ordinances.

Division of Historic and Cultural Affairs – Contact: Alice Guerrant 739-5685

There is a late 19th-c. to early 20th-c. agricultural complex (k-2828; shown on the 1931 Wyoming USGS 15' topographic map) in the middle of this parcel. The E. Bailey House (K-2827; shown on Beers Atlas of 1868) is directly across Canterbury Road from the project area, and the J. Bailey House (K-2826; also shown on Beers Atlas) is across Canterbury Road near the southern end of this parcel. An agricultural complex (K-2825; also on the 1931 Wyoming map) is on the same side of Canterbury Road somewhat further south. While there is only a low potential for historic-period archaeological sites here, there is a medium potential for prehistoric archaeological sites around the head of the remnant tributary in the woods and out into the field.

The DHCA requests that the historic complex be maintained on a large lot within the development. If this is not feasible, they would like an opportunity to record the house and outbuildings before any demolition activities take place. They also request that there be sufficient landscaping along Canterbury Road to block the view of this development from the adjacent and nearby historic properties. The DHCA strongly urges the developer to maintain the woods as they are. However, if this is not feasible, the DHCA would appreciate the opportunity to check the parcel for archaeological sites to learn something about their location and nature before any ground-disturbing or tree-clearing activities take place.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

1) The proposed development exceeds DelDOT traffic volume warrants for a traffic impact study (TIS). Accordingly, we will require a TIS for this development. These studies typically take 6 to 12 months from their initial scoping meeting to

the completion of DelDOT's review. However, there is a study already in progress for the Biggs Property, located across Route 15 from the proposed development, and it may be possible for the developer to save some time by using traffic counts and other information produced as part of that study. DelDOT understand that the developer's traffic engineer has already contacted Mr. Todd Sammons of our Development Coordination Section to obtain a scope for this study. Mr. Sammons may be reached at (302) 760-2134.

2) Andrews Lake Road is classified as a local road and Canterbury Road is classified as a major collector road. Local roads in Delaware typically have right-of-way widths ranging from 33 to 50 feet. Collector road rights-of-way also vary but are generally wider. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads and 40 feet from the centerline on collector roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.

3) The developer will be required to improve Canterbury Road to meet DelDOT's standard typical section for major collector roads (two 12-foot lanes and two 8-foot shoulders) for the length of the site frontage. They will also be required to improve Andrews Lake Road to meet DelDOT's standard typical section for local roads (two 11-foot lanes and two 5-foot shoulders) for the length of the site frontage.

   An entrance is proposed on Andrews Lake Road opposite Mamon Way in the Harrison Knoll subdivision. Consideration should be given to locating either that entrance or a second entrance opposite Pickwick Boulevard in the Pickwick Acres (a.k.a. South Glen) subdivision. If only one of these entrances is to be built, a safe pedestrian crossing should be provided at the other existing subdivision entrance.

   Although it was not mentioned at the PLUS meeting, protected left turn lanes would be likely be required at the Andrews Lake Road entrance(s) and a single lane roundabout should be considered as an alternative to protected left turn lanes. If a roundabout is to be used, it should be evaluated in the TIS.

4) The developer's site engineer should contact Mr. Brad Herb, the DelDOT project manager for Kent County, regarding their specific requirements for streets and access. He may be reached at (302) 266-9600.

The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-9071

Soils

Based on the Kent County soil survey Sassafras, Rumford, Mattapex, and Fallsington were mapped on subject parcel. Sassafras and Rumford are well-drained upland soils that, generally, have few limitations for development. Mattapex is a moderately well-drained soil of low-lying uplands that has moderate limitations for development. Fallsington is a poorly-drained wetland associated (hydric) soil that has severe limitations for development.

Wetlands

Statewide Wetland Mapping Project (SWMP) maps indicate the presence of palustrine forested wetlands. Because there is strong evidence that federally regulated wetlands exist on site, a wetland delineation, in accordance with the methodology established by the Corps of Engineers Wetlands Delineation Manual, (Technical Report Y-87-1) should be conducted. Once complete, this delineation should be verified Corps of Engineers through the Jurisdictional Determination process.

Impacts to Palustrine wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers also require 401 Water Quality Certification from the DNREC Wetland and Subaqueous Land Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Programs Section. Each of these certifications represents a separate permitting process. Impacts to streams and associated riparian wetlands, including road crossings, are regulated by the DNREC Wetlands and Subaqueous Lands Section, and by the Corps of Engineers.

To find out more about permitting requirements, the applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-4691 to schedule a meeting.

This project is located directly adjacent to sensitive headwater or near headwater riparian wetlands (Double Run and Spring Creeks) associated with the greater Murderkill River watershed – greatly increasing the probability of harmful impacts to surface and groundwater quality of all waters of said watershed, thus making it more difficult for the State to achieve the required TMDL nutrient reductions. Headwater streams and their

associated wetlands are important for the protection of water quality and the maintenance/integrity of the ecological functions throughout the length of the stream, including the floodplain system downstream. In recognition of this concern, the Watershed Assessment Section strongly recommends that the applicant consider preserving the existing natural forested buffer in its entirety. **Otherwise –a 100-foot upland buffer width is the minimum acceptable distance that should be maintained between all wetlands and water bodies (including ditches).** Lot lines, roadways, and stormwater management ponds should not be located within this buffer zone. In cases where natural buffer vegetation has been removed or reduced by past development or farming activities, the developer is encouraged to restore/establish to said buffer width or greater with native herbaceous and/or woody vegetation.

TMDLs

With the adoption of Total Maximum Daily Loads (TMDLs) as a "nutrient-runoff-mitigation strategy" for reducing nutrients in the Murderkill River watershed, reduction of nitrogen and phosphorus loading will be mandatory. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Nutrient reductions prescribed under TMDLs are assigned to those watersheds or basins on the basis of recognized water quality impairments. In the Murderkill watershed, the primary source of water quality impairment is associated with nutrient runoff from agricultural and/or residential development. In order to mitigate the aforementioned impairments, a TMDL reduction level of 50 and 30 percent will be required for nitrogen and phosphorus, respectively. DNREC requests that a full nutrient budget be calculated to ensure compliance. Please contact Lyle Jones at 739-9939. The applicant should be aware that the inclusion of stormwater management, wastewater treatment, buffers and wetlands as metrics for open space calculations – may understate the actual TMDL nutrient loading and, subsequently, the actual nutrient runoff as calculated from the nutrient budget protocol.

Impervious Cover

The Watershed Assessment Section feels that applicant should reduce imperviousness to the greatest degree practicable. Use of pervious paving materials in lieu of asphalt or concrete and significant efforts to increase forest cover via tree plantings - are examples of practical BMPs that could easily be implemented to reduce surface imperviousness. Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline.

Water Resource Protection Areas

The DNREC Water Supply Section has determined that the eastern half of the property falls entirely within an area of excellent groundwater recharge (see following map and attached map).

The proposed development would change the total impervious cover 1% to approximately 25% in proposed development area. The percentages were provided by the developer on the PLUS application. The land use would change from agricultural to residential. The proposed development area impacts the excellent recharge area.

The excellent recharge area corresponds roughly with a forested area on the eastern part of the property with 22.33 acres of this naturally forested area proposed for removal. The current state of forested recharge area is ideal to replenish the local unconfined aquifer. Whatever steps can be taken to preserve this area is encouraged.

DNREC Water Supply Section recommends that that portion of the new development within the excellent recharge area not exceed 20% impervious cover. The current proposed impervious cover would exceed this threshold. Further, some allowance for augmenting ground-water recharge should be considered since the impervious cover exceeds 20% but is less than 50% of that portion of the parcel within this area.

For more information refer to the Final Source Water Protection Guidance Manual for the Local Governments of Delaware
http://www.wr.udel.edu/swaphome/phase2/SWPguidancemanual.html

and

Ground-Water Recharge Design Methodology
http://www.wr.udel.edu/swaphome/phase2/Publications/swapp_manual_final/swapp_guidance_manual_supp_1_2005_05_02.pdf .

Meding Property (PLUS 2005-09-12) with excellent recharge in green and affected parcels outlined in light blue.

Water Supply

The project information sheets state that Artesian Water Company will be used to provide water for the proposed project. DNREC and Public Service Commission records indicate that the project is located within the public water service area granted to Tidewater Utilities under Certificate of Public Convenience and Necessity number PSC-1190. I recommend that the developer contact Tidewater Utilities to determine the availability of public water. Any questions concerning CPCNs should be directed to the Public Service Commission at 302-739-4247. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the

Construction and Use of Wells. A well construction permit must be obtained prior to constructing any well(s).

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

Sediment and Erosion Control/Stormwater Management

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. The plan review and approval as well as construction inspection will be coordinated through **Kent Conservation District**. Contact Jared Adkins at (302) 741-2600, ext. 3, for details regarding submittal requirements and fees.

As of April 11, 2005, stormwater best management practices must also consider water quality as well as quantity in impaired water bodies.

Drainage

The Drainage Program requests that all precautions be taken to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water.

The Drainage Program does not have a clear understanding how stormwater will be directed to the stormwater management area.

The Drainage Program requests the majority of the stormwater pipes on this project be located on drainage easements along the streets. Regarding drainage conveyances within the proposed subdivision that are not able to be located along a street, the Drainage Program strongly recommends said drainage conveyances be dedicated as a 30-foot drainage easement. All stormwater conveyances should be placed in the center of the 30-

foot drainage easement. Trees and shrubs planted within drainage easements should be spaced to allow for mechanized drainage maintenance or the reconstruction of drainage conveyances.
This project is within the Murderkill River Watershed, a designated critical area, with a promulgated Total Maximum Daily Load (TMDL). Existing riparian buffers should be preserved to aid in the reduction of nutrients, sediment, and other pollutants. For the further enhancement of water quality, the Drainage Program encourages additional widths of vegetated buffers and other water quality best management practices on this project.

Forest Preservation

According to the application, 22.33 acres out of 45.06 acres of forest is going to be removed for this project. However, nearly 90 lots, numerous roadways, and a stormwater management pond is located within the forested area and will likely result in a much higher percentage of tree removal. Trees will be removed as the site is built out and homes, driveways, sidewalks (if planned), ponds, and roadways are constructed. Future landowner activities (construction of playgrounds, sheds, swimming pools, etc.) also result in further clearing. Young trees planted in various locations in and around the subdivision is not a replacement for a forest block of more mature trees. The applicant should recalculate the amount of forest to be removed as it may have been underestimated.

In terms of wildlife, essentially 45.06 acres of habitat will be removed as species utilizing the forest will have to disperse into surrounding areas. This can result in an increase in human-animal conflicts and greater interactions on the highways. To reduce impacts to nesting birds and other wildlife species that utilize forests, we recommend that clearing not occur April 1st to July 31st. This is especially important as an estimated 5,000 acres of forest have been lost in Delaware since 1990 and the cumulative loss has led to a corresponding loss of forest-dependent species (Environmental Law Institute. 1999. Protecting Delaware's Natural Heritage: Tools for Biodiversity Conservation. ISBN#1-58576-000-5).

First of all, consideration should be given to reducing the number of lots and infrastructure in the forested portion of this parcel. Clearing on those lots that do remain in the wooded area should be minimized. Secondly, considering the function of trees in flood abatement and erosion control, trees should not be removed to create a stormwater management pond. This pond should be eliminated from the site plan, relocated to an area that is already cleared, or an alternate method of stormwater management be employed. Thirdly, the site plan should be reconfigured to allow for a larger area of open space in the wooded area rather than smaller, disconnected areas of open space that are

currently in the site plan. Larger, connected areas of open space are more useful to people as well as wildlife than smaller, fragmented sections behind lots, on corners, and in other irregular places. These disconnected areas are not particularly useful to all residents, are often underutilized and can become a maintenance problem.

Open Space

To maximize the existing buffering capacity and wildlife habitat on site, it is recommended that the developer minimize the amount of forest removal by relocating infrastructure (such as storm water management ponds) to areas outside of the forest and designating community open space along the forested areas. Doing so will preserve and expand the existing buffers on site and its value for birds and wildlife and it will create recreational opportunities for residents.

In areas set aside for passive open space, the developer is encouraged to consider establishment of additional forested areas or meadow-type grasses. Once established, these ecosystems provide increased water infiltration into groundwater, decreased run-off into surface water, air quality improvements, and require much less maintenance than traditional turf grass, an important consideration if a homeowners association will take over responsibility for maintenance of community open spaces.

Open space containing forest and/or wetlands should be placed into a permanent conservation easement or other permanent protection mechanism. Conservation areas should also be demarked to avoid infringement by homeowners.

Nuisance Waterfowl

Stormwater management ponds that remain in the site plan may attract waterfowl like resident Canada geese and mute swans. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species. We recommend native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (50 feet) around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however,

with proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Recreation

DNREC recommends that sidewalks be built fronting at least one side of residential streets and stub streets. A complete system of sidewalks will: 1) fulfill the recreation need for walking and biking facilities, 2) provide opportunities for neighbors to interact in the community, and 3) facilitate safe, convenient off-road access to neighboring communities, parks, public mass transit stops, schools, stores, work, etc.

We encourage the designer/builder to involve Kent County Parks and Recreation Department in the recreation components of this project. Carl Solberg can be reached at (302) 744-2490.

If a trail system is planned, we recommend that a series of stacking trail loops be designed with several access points and connections to adjacent communities. Community trail systems with long continuous trails, perimeter-only trails, and systems with few access points, often go unused and neglected. For trail design/construction specifications, contact Susan Moerschel at (302) 739-9235.

Solid Waste

Each Delaware household generates approximately 3,600 pounds of solid waste per year. On average, each new house constructed generates an additional 10,000 pounds of construction waste. Due to Delaware's present rate of growth and the impact that growth will have on the state's existing landfill capacity, the applicant is requested to be aware of the impact this project will have on the State’s limited landfill resources and, to the extent possible, take steps to minimize the amount of construction waste associated with this development.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 18.3 tons (36,530.5 pounds) per year of VOC (volatile organic compounds), 15.1 tons (30,244.8 pounds) per year of NOx (nitrogen oxides), 11.2 tons (22,315.2 pounds) per year of SO2 (sulfur dioxide), 1.0 ton (1,986.4 pounds) per year of fine particulates and 1,527.9 tons (3,055,731.2 pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 7.4 tons (14,734.4 pounds) per year of VOC (volatile organic compounds), 0.8 ton (1,621.2 pounds) per year of NOx (nitrogen oxides), 0.7 ton (1,345.4 pounds) per year of SO2 (sulfur dioxide), 0.9 ton (1,736.2 pounds) per year of fine particulates and 29.9 tons (59,730.0 pounds) per year of CO2 (carbon dioxide).
Emissions from electrical power generation associated with this project are estimated to be 2.9 tons (5,839.7 pounds) per year of NOx (nitrogen oxides), 10.2 tons (20,311.9 pounds) per year of SO2 (sulfur dioxide) and 1,498.0 tons (2,996,001.1 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO_2	$PM_{2.5}$	CO_2
Mobile	18.3	15.1	11.2	1.0	1527.9
Residential	7.4	0.8	0.7	0.9	29.9
Electrical Power		2.9	10.2		1498.0
TOTAL	25.7	18.8	22.1	1.9	3055.8

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 2.9 tons of nitrogen oxides per year and 10.2 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage, http://www.energystar.gov/:

“ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

building envelope upgrades,
high performance windows,
controlled air infiltration,
upgraded heating and air conditioning systems,
tight duct systems and
upgraded water-heating equipment.”

The DNREC Energy Office is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on

energy costs and reduce air pollution. We highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

They also recommend that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction. The development should provide tie-ins to the nearest bike paths, links to mass transit, and fund a lawnmower exchange program for their new occupants.

State Fire Marshal's Office – Contact: John Rossiter 302-739-4394

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. **Fire Protection Water Requirements**:
- Where a water distribution system is proposed for single family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.
- The infrastructure for fire protection water shall be provided, including the size of water mains.

b. **Accessibility:**
- All premises which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Andrews Lake Road and Canterbury Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.

- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

c. **Gas Piping and System Information:**
- Provide type of fuel proposed, and show locations of bulk containers on plan.

d. **Required Notes**:
- Provide a note on the final plans submitted for review to read " All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Name of Water Supplier
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.delawarestatefiremarshal.com, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Milton Melendez 698-4500

Neither the Delaware Department of Agriculture nor the Delaware Forest Service has any objections to the Meding property application. The site is located on a long-range designated controlled development area within the county. The *Strategies for State Policies and Spending* encourages responsible development in areas within a Growth Level 2 Zone.

However, this site is a part of an "excellent recharge" area. The Department of Agriculture and the Department of Natural Resources has mapped and evaluated all ground water potential recharge areas throughout the state. An "excellent" rating designates an area as having the most important groundwater recharge qualities. Maintaining existing vegetation in an area with either "Excellent" or "Good" recharge designation is crucial for the overall environmental health of our state and extremely important to ensuring a safe drinking water supply for future generations. Finally, the loss of every acre of land designated as "excellent" or "good" recharge adversely impacts the future prospects for agriculture in Delaware. Again, retention of existing cover is essential to ensure an adequate future water supply for the future viability of agriculture in the First State. We strongly encourage the developer to consider recharge potential during the design phase and during construction.

Right Tree for the Right Place

The Delaware Department of Agriculture Forest Service encourages the developer to use the "Right Tree for the Right Place" for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

Native Landscapes

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

Public Service Commission - Contact: Andrea Maucher 739-4247

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

Delaware State Housing Authority – Contact Jimmy Atkins 739-4263

According to the *State Strategy Map*, the majority of the proposal is located in Investment Level 2 area, which overlaps a Level 3 area. As a general planning practice, DSHA encourages residential development in these areas where residents will have proximity to services, markets, and employment opportunities. Furthermore, the proposal targets units for first time homebuyers. According to the most recent real estate data collected by DSHA, the average home price in Kent County is $174,015. However, families earning 80% of Kent County's median income only qualify for mortgages of $147,099. The provision of units within reach of families earning at least 80% of Kent County's median income would help increase housing opportunities for first time homebuyers.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of

State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

Constance C. Holland, AICP
Director

CC: Kent County